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From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

To:

Commissioner
US Department of Commerce
United States Patent and Trademark
Office, PCT
2011 South Clark Place Room
CP2/5C24
Arlington, VA 22202
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year)

26 April 2001 (26.04.01)

International application No.

PCT/AU00/00936

Applicant's or agent's file reference

40451025tbct

International filing date (day/month/year)

07 August 2000 (07.08.00)

Priority date (day/month/year)

06 August 1999 (06.08.99)

Applicant

CLARK, Graeme, Milbourne et al

1. The designated Office is hereby notified of its election made:



in the demand filed with the International Preliminary Examining Authority on:

08 February 2001 (08.02.01)



in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was

was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

Claudio Borton

Telephone No.: (41-22) 338.83.38

PATENT COOPERATION TREATY

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29 DEC 2000

FREEHILLS CARTER SMITH BEADLE

PCT

From the INTERNATIONAL BUREAU

To:

FREEHILLS CARTER SMITH BEADLE
101 Collins Street
Melbourne, VIC 3000
AUSTRALIE

NOTIFICATION CONCERNING
SUBMISSION OR TRANSMITTAL
OF PRIORITY DOCUMENT

(PCT Administrative Instructions, Section 411)

Date of mailing (day/month/year) 11 December 2000 (11.12.00)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference 40451025tbct	
International application No. PCT/AU00/00936	International filing date (day/month/year) 07 August 2000 (07.08.00)
International publication date (day/month/year) Not yet published	Priority date (day/month/year) 06 August 1999 (06.08.99)
Applicant THE UNIVERSITY OF MELBOURNE et al	

1. The applicant is hereby notified of the date of receipt (except where the letters "NR" appear in the right-hand column) by the International Bureau of the priority document(s) relating to the earlier application(s) indicated below. Unless otherwise indicated by an asterisk appearing next to a date of receipt, or by the letters "NR", in the right-hand column, the priority document concerned was submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b).
2. This updates and replaces any previously issued notification concerning submission or transmittal of priority documents.
3. An asterisk(*) appearing next to a date of receipt, in the right-hand column, denotes a priority document submitted or transmitted to the International Bureau but not in compliance with Rule 17.1(a) or (b). In such a case, **the attention of the applicant is directed** to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.
4. The letters "NR" appearing in the right-hand column denote a priority document which was not received by the International Bureau or which the applicant did not request the receiving Office to prepare and transmit to the International Bureau, as provided by Rule 17.1(a) or (b), respectively. In such a case, **the attention of the applicant is directed** to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.

<u>Priority date</u>	<u>Priority application No.</u>	<u>Country or regional Office or PCT receiving Office</u>	<u>Date of receipt of priority document</u>
06 Augu 1999 (06.08.99)	PQ 2071	AU	24 Augu 2000 (24.08.00)

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No. (41-22) 740.14.35

Authorized officer

J. Leitao

Telephone No. (41-22) 338.83.38

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



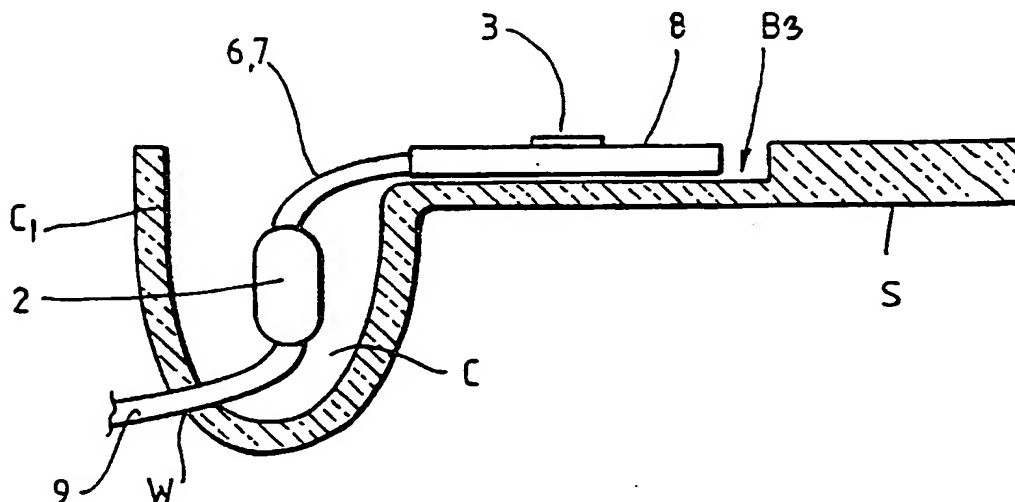
(43) International Publication Date
15 February 2001 (15.02.2001)

PCT

(10) International Publication Number
WO 01/10369 A1

- (51) International Patent Classification⁷: A61F 11/04, 2/18 (74) Agent: FREEHILLS CARTER SMITH BEADLE; 101 Collins Street, Melbourne, VIC 3000 (AU).
- (21) International Application Number: PCT/AU00/00936
- (22) International Filing Date: 7 August 2000 (07.08.2000)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
PQ 2071 6 August 1999 (06.08.1999) AU
- (71) Applicant (for all designated States except US): THE UNIVERSITY OF MELBOURNE [AU/AU]; Grattan Street, Parkville, VIC 3052 (AU).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): CLARK, Graeme, Melbourne [AU/AU]; 13 Banoon Road, Eltham, VIC 3095 (AU). PYMAN, Brian, Clive [AU/AU]; 53 Victoria Crescent, Mont Albert, VIC 3127 (AU). O'LEARY, Stephen, John [AU/AU]; 1104 Whitehorse Road, Box Hill, VIC 3128 (AU).
- Published:
— With international search report.
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: IMPROVED COCHLEAR IMPLANT PACKAGE



(57) Abstract: An implant package for a cochlear implant, including stimulator electronics contained within a protective housing (2) and being coupled to an electrode array (9) for insertion into the cochlea of a patient, and being further coupled to a receiving and/or transmitting coil (8) enclosed within a protective casing, said protective housing being dimensioned and shaped to be capable of location within the mastoid cavity (C) of the patient nearer to the entry point of the electrode array to the cochlea, said further coupling being contained in a flexible connection between the protective housing (2) and the protective casing (8).

WO 01/10369 A1

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU00/00936

A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl. ⁷: A61F 11/04, 2/18

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

A61F 2/IC, 11/IC

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
AU: IPC AS ABOVE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

DERWENT
JAPIO

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 99/06108 A (ALFRED E MANN FOUNDATION FOR SCIENTIFIC RESEARCH et al) 11 February 1999 See page 3 lines 1-9, page 5 line 28-page 6 line 9 and page 20 lines 1-16.	1-3, 5-8
A	US 5814095 A (MULLER et al) 29 September 1998 See figures 1-4.	
A	US 5558618 A (MANIGLIA) 24 September 1996 See entire document.	

☒ Further documents are listed in the continuation of Box C ☒ See patent family annex

<p>* Special categories of cited documents:</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier application or patent but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p>		<p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</p> <p>"&" document member of the same patent family</p>
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Date of the actual completion of the international search

28 September 2000

Date of mailing of the international search report

10 OCT 2000

Name and mailing address of the ISA/AU

AUSTRALIAN PATENT OFFICE
PO BOX 200, WODEN ACT 2606, AUSTRALIA
E-mail address: pct@ipaaustralia.gov.au
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Authorized officer

JOHN HO
Telephone No : (02) 6283 2329

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/AU00/00936

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report				Patent Family Member			
WO	9906108	AU	86804/98	EP	999874		
US	5814095	—	DE	19638158	EP	831673	DE
		19638159	EP	831674			
US	5558618	US	5906635				
WO	9705673	AU	31054/95				
WO	8300999	AU	88333/82	AU	89540/82	BE	894422
		BR	8207864	CA	1194552	DK	1993/83
		EP	76069	US	4419995		
END OF ANNEX							

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU00/00936

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 97/05673 A (COCHLEAR PTY LTD) 13 February 1997 See entire document.	
A	WO 83/00999 A (HOCHMAIR) 31 March 1983 See entire document.	

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

10/018,98814

REC'D 29 JUN 2001
WIFC PCT

Applicant's or agent's file reference 40451025 TNB:NB	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416).
International Application No. PCT/AU00/00936	International Filing Date (day/month/year) 7 August 2000	Priority Date (day/month/year) 6 August 1999
International Patent Classification (IPC) or national classification and IPC Int. Cl. ⁷ A61F 11/04, 2/18		
Applicant THE UNIVERSITY OF MELBOURNE et al		

1.	This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.																								
2.	This REPORT consists of a total of 3 sheets, including this cover sheet. <input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT). These annexes consist of a total of sheet(s).																								
3.	This report contains indications relating to the following items: <table style="width: 100%; margin-top: 10px;"> <tr> <td style="width: 5%;">I</td> <td style="width: 5%;"><input checked="" type="checkbox"/></td> <td style="width: 90%;">Basis of the report</td> </tr> <tr> <td>II</td> <td><input type="checkbox"/></td> <td>Priority</td> </tr> <tr> <td>III</td> <td><input type="checkbox"/></td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td>IV</td> <td><input type="checkbox"/></td> <td>Lack of unity of invention</td> </tr> <tr> <td>V</td> <td><input checked="" type="checkbox"/></td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td>VI</td> <td><input type="checkbox"/></td> <td>Certain documents cited</td> </tr> <tr> <td>VII</td> <td><input type="checkbox"/></td> <td>Certain defects in the international application</td> </tr> <tr> <td>VIII</td> <td><input type="checkbox"/></td> <td>Certain observations on the international application</td> </tr> </table>	I	<input checked="" type="checkbox"/>	Basis of the report	II	<input type="checkbox"/>	Priority	III	<input type="checkbox"/>	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	IV	<input type="checkbox"/>	Lack of unity of invention	V	<input checked="" type="checkbox"/>	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	VI	<input type="checkbox"/>	Certain documents cited	VII	<input type="checkbox"/>	Certain defects in the international application	VIII	<input type="checkbox"/>	Certain observations on the international application
I	<input checked="" type="checkbox"/>	Basis of the report																							
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V	<input checked="" type="checkbox"/>	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement																							
VI	<input type="checkbox"/>	Certain documents cited																							
VII	<input type="checkbox"/>	Certain defects in the international application																							
VIII	<input type="checkbox"/>	Certain observations on the international application																							

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Date of submission of the demand 8 February 2001	Date of completion of the report 8 June 2001
Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustalia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer JOHN HO Telephone No. (02) 6283 2329

I. Basis of the report**1. With regard to the elements of the international application:***

- ☒ the international application as originally filed.
- ☐ the description, pages , as originally filed,
 pages , filed with the demand,
 pages , received on with the letter of
- ☐ the claims, pages , as originally filed,
 pages , as amended (together with any statement) under Article 19,
 pages , filed with the demand,
 pages , received on with the letter of
- ☐ the drawings, pages , as originally filed,
 pages , filed with the demand,
 pages , received on with the letter of
- ☐ the sequence listing part of the description:
 pages , as originally filed
 pages , filed with the demand
 pages , received on with the letter of

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, was on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/fig.

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims 1-8	YES
	Claims -	NO
Inventive step (IS)	Claims 1-8	YES
	Claims -	NO
Industrial applicability (IA)	Claims 1-8	YES
	Claims -	NO

2. Citations and explanations (Rule 70.7)

The following documents identified in the International Search Report have been considered for the purposes of this report:

WO 99/06108 A
US 5814095 A

The present statement of claims are directed to an implant package for a cochlear implant having the stimulator electronics contained within a protective housing. The stimulator electronics are operably coupled to a receiving/transmitting coil which is enclosed in a protective casing shaped and dimensioned to be located within the mastoid cavity of the patient nearer to the entry point of the electrode array to the cochlea wherein the coupling between the protective housing and the protective casing is contained in a flexible connection.

WO 99/06108 refers to an implantable cochlear system having two implantable devices, each having its own case, jointed by a detachable cable (see page 3 lines 1-9 for instance). Page 5 lines 28-36 of the citation refers to one housing having "...wires going to the stimulation and sensing electrodes and devices, and the interface circuitry for stimulating and sensing as well as other signal processing and conditioning circuits..." and the other having "...coil, battery, battery charging and power regulation circuitry..". There is however no clear teaching in this document that one of these housings is placed or adapted for placement in the mastoid cavity.

US 5814095 teaches the implantation of a microphone housing (11) or an electromechanical converter (25) in a mastoid cavity (18). There is however no specific teaching in this document that the signal processing unit (21) can be placed within the mastoid cavity.

Therefore the subject matter of claims 1-8 is new and meets the requirements of Article 33(2) PCT with regard to the requirement for novelty.

The claimed invention is also not obvious in the light of any of the cited documents nor disclosed in any obvious combination, nor would the claimed invention be obvious to a person skilled in the art in the light of common general knowledge by itself or in combination with any of these documents.